ABSTRACT

A method of bonding lattice-mismatched semiconductors is provided. The method includes forming a Ge-based virtual substrate and depositing on the virtual substrate a CMP layer that forms a planarized virtual substrate. Also, the method

5   includes bonding a Si substrate to the planarized virtual substrate and performing layer exfoliation on selective layers of the planarized virtual substrate producing a damaged layer of Ge. Furthermore, the method includes removing the damaged layer of Ge.